



09/513328

cgc

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Bruce W. Curtis

Attorney Docket No.: SUN1P701/P4732

Patent: 6,934,761 B1

Issued: August 23, 2005

Title: USER LEVEL WEB SERVER CACHE  
CONTROL OF IN-KERNEL HTTP CACHE

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on November 4, 2005 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: \_\_\_\_\_

\_\_\_\_\_ Aurelia M. Sanchez

**REQUEST FOR CERTIFICATE OF CORRECTION  
OF OFFICE MISTAKE  
(35 U.S.C. §254, 37 CFR §1.322)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Attn: Certificate of Correction

**Certificate  
NOV 14 2005  
of Correction**

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) at least one copy of which is suitable for printing. The errors together with the exact page and line number where the errors are shown correctly in the application file are as follows:

**SPECIFICATION:**

1. Column 7, line 21, change "manager at shown" to --manager as shown--. This appears correctly in the patent application as filed on February 25, 2000, on page 16, line 7.

**CLAIMS:**

1. In line 3 of claim 1 (column 10, line 60) change "a request" to --a HTTP request--. This appears correctly in Amendment E as filed on November 9, 2004, on page 2, paragraph 2, line 3.

NOV 17 2005

2. In line 1 of claim 4 (column 11, line 24) change "method recited" to --method as recited--. This appears correctly in Amendment E as filed on November 9, 2004, on page 3, paragraph 1, line 1.

3. In line 11 of claim 10 (column 12, line 47) change "with HTTP" to --with the HTTP--. This appears correctly in Amendment E as filed on November 9, 2004 on page 7, paragraph 3, line 9, as claim 26.

Patentee hereby requests expedited issuance of the Certificate of Correction because the error lies with the Office and because the error is clearly disclosed in the records of the Office. As required for expedited issuance, enclosed is documentation that unequivocally supports the patentee's assertion without needing reference to the patent file wrapper.

It is noted that the above-identified errors were printing errors that apparently occurred during the printing process. Accordingly, it is believed that no fees are due in connection with the filing of this Request for Certificate of Correction. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. SUN1P701).

Respectfully submitted,  
BEYER WEAVER & THOMAS, LLP



Alan S. Hodes  
Registration No. 38,185

P.O. Box 70250  
Oakland, CA 94612-0250  
650-961-8300

NOV 17 2005

attributes from the HTTP daemon to the cache manager, the web server can control the information that is transmitted to clients as well as the information that is stored in the HTTP cache.

Since the response data was not stored in the cache, it may be desirable  
5 to store the current response data and associated information (e.g., one or more caching attributes) in the cache. FIG. 7 is a process flow diagram illustrating a method of processing a response received by the cache manager as shown at block 414 of FIG. 4. As shown at block 702, the NOCACHE state is obtained from the HTTP request-response object. If the NOCACHE state is not TRUE,  
10 the information is stored in the cache at block 706. More particularly, the response data is stored so that it may later be retrieved from the cache when a subsequent HTTP request is received. In addition, the ADVISORY state may be stored in the cache so that the cache manager may ascertain whether a cached object should be returned without obtaining permission from the  
15 HTTP daemon. Moreover, the CTAG may be stored in the cache so that multiple HTTP requests may be associated with a single response, thereby reducing the amount of memory required to store HTTP response data. If the NOCACHE state is TRUE, the information is not cached. Regardless of whether the information associated with the HTTP request is cached, the  
20 response data is transmitted to the client at block 708.

As described above with reference to block 408 of FIG. 4, when the response data for a particular HTTP request is located in the HTTP cache, it may be desirable to consult with the web server (e.g., HTTP daemon) in order to ascertain whether the data in the cache is to be modified and/or whether the

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A method of managing an in-kernel HTTP cache in a web server, comprising:
  - receiving a HTTP request;
  - determining whether response data associated with the HTTP request is in the in-kernel HTTP cache;
  - when it is determined that response data associated with the HTTP request is in the in-kernel HTTP cache, obtaining an advisory state associated with the HTTP request from the in-kernel HTTP cache, the advisory state when in a first state indicating that it is necessary to obtain permission from a HTTP daemon to determine whether the response data can be transmitted and when in a second state indicating that the response data can be transmitted without obtaining permission from the HTTP daemon; and
  - transmitting the response data in accordance with the advisory state associated with the HTTP request.
  
2. (Previously Presented) The method as recited in claim 1, wherein transmitting the response data in accordance with the advisory state associated with the HTTP request comprises:
  - when the advisory state is in the first state, sending an advisory request to the HTTP daemon, the advisory request requesting an advise state from the HTTP daemon indicating an action to be taken with the response data, and receiving the advise state from the HTTP daemon.
  
3. (Previously Presented) The method as recited in claim 2, wherein transmitting the response data in accordance with the advisory state associated with the HTTP request when the advisory state is in the first state further comprises:
  - transmitting the response data without modifying the response data in the in-kernel HTTP cache when the advise state is in a first state.

4. (Previously Presented) The method as recited in claim 2, wherein transmitting the response data in accordance with the advisory state associated with the HTTP request when the advisory state is in the first state further comprises:

modifying the response data stored in the in-kernel HTTP cache as specified by the advise state.

5. (Previously Presented) The method as recited in claim 4, wherein modifying the response data comprises:

removing at least one of the response data and the advisory state from the in-kernel HTTP cache when the advise state is in a second state.

6. (Previously Presented) The method as recited in claim 4, wherein modifying the response data comprises:

receiving second response data from the HTTP daemon; and

performing at least one of replacing the response data in the in-kernel HTTP cache with the second response data and replacing the advisory state in the in-kernel HTTP cache with a second advisory state when the advise state is in a third state.

7. (Previously Presented) The method as recited in claim 2, wherein transmitting the response data in accordance with the advisory state associated with the HTTP request when the advisory state is in the first state further comprises:

receiving second response data from the HTTP daemon; and

transmitting the second response data when the advise state is in a fourth state without transmitting the response data in the in-kernel HTTP cache and without storing the second response data in the in-kernel HTTP cache.

8. (Withdrawn) In a web server, a method of managing an in-kernel cache, comprising:

receiving a request;

determining whether response data associated with the request is in the cache; and

when it is determined that the response data associated with the request is not in the cache, sending the request to a process and receiving response data associated with

instructions for transmitting the response data in accordance with the advisory state associated with the HTTP request.

25. (Previously Presented) An apparatus for managing an in-kernel HTTP cache in a web server, comprising:

means for receiving a HTTP request;

means for determining whether response data associated with the HTTP request is in the in-kernel HTTP cache;

means for when it is determined that response data associated with the HTTP request is in the in-kernel HTTP cache, obtaining an advisory state associated with the HTTP request from the in-kernel HTTP cache, the advisory state when in a first state indicating that it is necessary to obtain permission from a HTTP daemon to determine whether the response data can be transmitted and when in a second state indicating that the response data can be transmitted without obtaining permission from the HTTP daemon; and

means for transmitting the response data in accordance with the advisory state associated with the HTTP request.

26. (Previously Presented) An apparatus for managing an in-kernel HTTP cache in a web server, comprising:

a processor; and

a memory, at least one of the processor and the memory being adapted for:

receiving a HTTP request;

determining whether response data associated with the HTTP request is in the in-kernel HTTP cache;

when it is determined that response data associated with the HTTP request is in the in-kernel HTTP cache, obtaining an advisory state associated with the HTTP request from the in-kernel HTTP cache, the advisory state when in a first state indicating that it is necessary to obtain permission from a HTTP daemon to determine whether the response data can be transmitted and when in a second state indicating that the response data can be transmitted without obtaining permission from the HTTP daemon; and  
transmitting the response data in accordance with the advisory state associated with the HTTP request.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB Control number

(Also Form PT-1050)

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO. : 6,934,761 B1

Page 1 of 1

DATED : August 23, 2005

INVENTOR(S) : Bruce W. Curtis

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

**In the Specifications:**

Column 7, line 21, change "manager at shown" to --manager as shown--.

**In the Claims:**

In line 3 of claim 1 (column 10, line 60) change "a request" to --a HTTP request--.

In line 1 of claim 4 (column 11, line 24) change "method recited" to --method as recited--.

In line 11 of claim 10 (column 12, line 47) change "with HTTP" to --with the HTTP--.

MAILING ADDRESS OF SENDER:

PATENT NO. 6,934,761 B1

**Alan S. Hodes**  
BEYER WEAVER & THOMAS, LLP  
P.O. Box 70250  
Oakland, CA 94612-0250

No. of Additional Copies

**Burden Hour Statement:** This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

NOV 17 2005